

Amendments to the Claims

The following listing of claims replaces all prior versions of the claims in the Application. With reference to the listing it is noted that, herewith, claims 32 and 34 are cancelled without prejudice or disclaimer, claims 1, 2, 7, 8, 15, 16, 21, 22, 29, 30, 31, and 33 are amended, and new claims 35 and 36 are added.

Listing of Claims

1. (Currently Amended) A control method for an image input apparatus for reading an original and compressing image data of the read original in real time, said method comprising:

ensuring a memory area for storing compressed image data;

reading an original and outputting image data;

compressing the image data in real time;

storing the compressed image data in the ensured memory area;

determining whether the compressed image data is completely stored in the ensured memory area; and

~~changing a compression ratio when the compressed image data is not completely stored in the ensured memory area;~~

~~setting a predetermined number of times; and~~

wherein the changing of the compression ratio is performed when the compressed image data is not completely stored in the ensured memory area, and when the compression ratio is changed, repeating the read operation reading of the same original, the compression operation using the changed compression ratio, and the storing of the compressed image data, the determination operation, and the changing of the compression ratio are repeated, with the

repetition being limited to the a predetermined number of times, and the predetermined number of times being changed upon designation by a user.

2. (Currently Amended) The method according to claim 1 further comprising:

measuring a data amount of the compressed image data; and

re-ensuring, performed in advance of changing the compression ratio first time, a

memory area capable of storing image data in the measured data amount or a maximum memory area available when the memory area cannot be ensured when the compressed image data is not completely stored in the ensured memory area;

~~wherein the measuring of the data amount of the compressed image data and the re-ensuring of the memory area are performed before storing of the compressed image data.~~

3. (Canceled)

4. (Previously Presented) The method according to claim 1, wherein, in ensuring the memory area, the memory is ensured on the basis of the compression ratio and an original size.

5. (Previously Presented) The method according to claim 1, wherein, in changing the compression ratio, the compression ratio is increased by one step.

6. (Previously Presented) The method according to claim 1, wherein, in compressing the image data, JPEG compression is performed.

7. (Currently Amended) A control method for an image input apparatus for reading an original and compressing image data of the read original in real time, said method comprising:

ensuring a memory area for storing compressed image data;

reading an original and outputting image data;

compressing the image data in real time;

storing the compressed image data in the ensured memory area;

determining whether the compressed image data is completely stored in the ensured memory area; and

~~changing a resolution when the compressed image data is not completely stored in the ensured memory area;~~

~~setting a predetermined number of times; and~~

wherein the changing of the resolution is performed when the compressed image data is not completely stored in the ensured memory area, and when the resolution is changed, repeating the read-operation reading of the same original using the changed resolution, the compression operation, and the storing of the compressed image data, the determination operation, and the changing of the resolution are repeated, with the repetition being limited to the a predetermined number of times, and the predetermined number of times being changed upon designation by a user.

8. (Currently Amended) The method according to claim 7 further comprising:

measuring a data amount of the compressed image data; and

re-ensuring, performed in advance of changing the resolution first time, a memory area capable of storing image data in the measured data amount or a maximum memory area available

when the memory area cannot be ensured when the compressed image data is not completely stored in the ensured memory area;

~~wherein the measuring of the data amount of the compressed image data and the re-ensuring of the memory area are performed before storing of the compressed image data.~~

9. (Canceled)

10. (Previously Presented) The method according to claim 7, wherein, in ensuring the memory area, the memory area is ensured on the basis of an original size.

11. (Previously Presented) The method according to claim 7, wherein, in changing the resolution, the resolution is decreased by one step.

12. (Previously Presented) The method according to claim 11 further comprising setting a width of one-step decrease of the resolution.

13. (Previously Presented) The method according to claim 7, wherein, in changing the resolution, the resolution is changed for a color difference component of the image data.

14. (Previously Presented) The method according to claim 7, wherein, in compressing the image data, JPEG compression is performed.

15. (Currently Amended) An image input apparatus comprising:

a read unit adapted to read an original and output image data;

a compression unit adapted to compress the image data in real time;

a storage unit adapted to store the compressed image data;

a control unit adapted to ensure in said storage unit a memory area for storing the compressed image data, control to store the compressed image data into the ensured memory area, and, as long as the compressed image data is not completely stored in the ensured memory area, repeatedly perform an operation of to change changing a compression ratio of said compression unit, when the compressed image data is not completely stored in the ensured memory area of said storage unit, and to repeat the read operation of controlling said read unit to read the same original, by said read unit and the compression operation by controlling said compression unit to compress the image data using the changed compression ratio, and storing the compressed image data in the ensured memory area, with the repetition of the operation being limited to a plural predetermined number of times; and

a setting unit adapted to set the ~~plural~~ number of times.

16. (Currently Amended) The apparatus according to claim 15 wherein said control unit measures a data amount of the compressed image data, and when the image data is not completely stored, re-ensures, in advance of changing the compression ratio first time, in said storage unit a memory area capable of storing image data in the measured data amount or a maximum memory area available when the memory area cannot be ensured, and repeats the read of the same original after the memory area is re-ensured.

17. (Canceled)

18. (Previously Presented) The apparatus according to claim 15, wherein said memory area of the storage unit is ensured on the basis of the compression ratio and an original size.

19. (Previously Presented) The apparatus according to claim 15, wherein said control unit increases the compression ratio by one step.

20. (Previously Presented) The apparatus according to claim 15, wherein said compression unit performs JPEG compression.

21. (Currently Amended) An image input apparatus comprising:

a read unit adapted to read an original and output image data;

a compression unit adapted to compress the image data in real time;

a storage unit adapted to store the compressed image data;

a control unit adapted to ensure in said storage unit a memory area for storing the compressed image data, control to store the compressed image data into the ensured memory area, and, as long as the compressed image data is not completely stored in the ensured memory area, repeatedly perform an operation of change changing a resolution used by said read unit, when the compressed image data is not completely stored in the ensured memory area of said storage unit, and to repeat the read operation of controlling said read unit to read the same original by said read unit using the changed resolution, and the compression operation by controlling said compression unit to compress the image data, and storing the compressed image data in the ensured memory area, with the repetition of the operation being limited to a plural

predetermined number of times; and

a first setting unit adapted to set the ~~plural~~ number of times.

22. (Currently Amended) The apparatus according to claim 21 wherein said control unit measures a data amount of the compressed image data, and when the image data is not completely stored, re-ensures, in advance of changing the resolution first time, in said storage unit a memory area capable of storing image data in the measured data amount or a maximum memory area available when the memory area cannot be ensured, ~~and repeats the read of the same original after the memory area is re-ensured.~~

23. (Canceled)

24. (Previously Presented) The apparatus according to claim 21, wherein said memory area of the storage unit is ensured on the basis of an original size.

25. (Previously Presented) The apparatus according to claim 21, wherein said control unit decreases the resolution by one step.

26. (Previously Presented) The apparatus according to claim 25 further comprising a setting unit adapted to set a width of one-step decrease of the resolution.

27. (Previously Presented) The apparatus according to claim 21, wherein said control unit changes the resolution for a color difference component of the image data.

28. (Previously Presented) The apparatus according to claim 21, wherein said compression unit performs JPEG compression.

29. (Currently Amended) A computer program product comprising a computer usable medium having computer readable program code means embodied in said medium for ~~[[a]] realizing the control method described in claim 1 for an image input apparatus for reading an original and compressing image data of the read original in real time, said product including:~~

~~first computer readable program code means of ensuring a memory area for storing compressed image data;~~

~~second computer readable program code means of reading an original and outputting image data;~~

~~third computer readable program code means of compressing the image data in real time;~~

~~fourth computer readable program code means of storing the compressed image data in the memory area ensured by said first computer readable program code means;~~

~~fifth computer readable computer code means of, when the compressed image data is not completely stored, changing a compression ratio used by said third computer readable program code means;~~

~~sixth computer readable program code means of setting a predetermined number of times;~~
~~and~~

~~seventh computer readable program code means of, when the compression ratio is changed by said fifth computer readable program code means, controlling to execute said second to fourth computer readable program code means using the changed compression ratio.~~

30. (Currently Amended) A computer program product comprising a computer usable medium having computer readable program code means embodied in said medium for ~~[[a]]~~ realizing the control method described in claim 7 for an image input apparatus for reading an original and compressing image data of the read original in real time, said product including:

~~first computer readable program code means of ensuring a memory area for storing compressed image data;~~

~~second computer readable program code means of reading an original and outputting image data;~~

~~third computer readable program code means of compressing the image data in real time;~~

~~fourth computer readable program code means of storing the compressed image data in the memory area ensured by said first computer readable program code means;~~

~~fifth computer readable computer code means of, when the compressed image data is not completely stored, changing a resolution used by said third computer readable program code means;~~

~~sixth computer readable program code means of setting a predetermined number of times;~~
and

~~seventh computer readable program code means of, when the resolution is changed by said fifth computer readable program code means, controlling to execute said second to fourth computer readable program code means using the changed compression ratio.~~

31. (Currently Amended) The method according to claim 2, wherein said ~~changing~~ of the compression ratio is ~~performed~~ changed when the memory area capable of storing image data in the measured data amount cannot be re-ensured, and ~~reading of the same original is repeated~~

~~after the compression ratio is changed~~ the repetition is executed.

32. (Canceled)

33. (Currently Amended) The apparatus according to claim 16, wherein said control unit ~~changes the compression ratio of said compression unit~~ executes the repetition of the operation when the memory area capable of storing image data in the measured data amount can not be re-ensured in said storage unit, ~~and repeats the read operation of the same original by said read unit after the compression ratio is changed.~~

34. (Canceled)

35. (New) The method according to claim 8, wherein the resolution is changed when the memory area capable of storing image data in the measured data amount cannot be re-ensured, and the repetition is executed.

36. (New) The apparatus according to claim 22, wherein said control unit executes the repetition of the operation when the memory area capable of storing image data in the measured data amount can not be re-ensured in said storage unit.